

Work Order ID 50982

July 28, 2009 1:55:39 PM



Page 1

Item ID: D206-667-203

Accept



Setup Start



Revision ID: C

Stop



Item Name: Crosstube Aft

Start Date: 7/30/09 Start Qty: 1.00

Cust Item ID:

Required Date: 8/14/09 Req'd Qty: 1.00

Customer:

Reference:

Run Start



Approvals: Process Plan: [Signature] Date: 09-09-23 Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D206-667-243	Rev C								

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile and create labels as per PPP D206-667-203 CHG003

509/10/22

HJ for BG 09/10/22

110

0.00



BENDING MACHINE - CROSSTUBES

CNC Bend 2

Memo

0.00

CNC Alpha 160 Bender

Bend tube as per Dwg D206-667-243 using CNC bender program 206L-AF and Folio FT _____

(IX)

Q

MB 09-09-29

120

QC15- Crosstube Dimensional Check

0.00



QC

Memo

0.00

Quality Control

27 509/10/29

(FL)

f

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	----------------	--------------	--------------	---------------	---------------	------------------	----------------

130

0.00



Crosstubes

Crosstubes

Memo

0.00

Crosstubes

1-Drill pilot holes in tube using drill Jig DT8583 & DT8584 as per Dwg D206-667-243. Drill all (3) top holes. □2-Drill and Ream all holes in tube to finish size using drill Jig DT8583 & DT8584 as per Dwg D206-667-243 Check dimensions between holes on all

14

Q

mb 09-09-30

140

0.00



Crosstubes Chemical Conversion

HandFXtube

Memo

0.00

Hand Finishing Crosstubes

1

ANM9-9-30

150

0.00



QC3- Inspect Part Finish

QC

Memo

0.00

Quality Control

2) 8 09/10/09

40

Q

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	----------------	--------------	--------------	---------------	---------------	------------------	----------------

160

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

170

Outsource process - NDT per QSI038 4.1

0.00



Outsource2

Memo

0.00

Outsource process - NDT

Liquid Penetrant Inspection as per QSI 038 Or ☐ Issue P/O: 10557 ☐ LPI as per ASTM 1417 ☐ Level 2 Attach copy of NDT results to work order

180

Packaging

0.00



Packaging

Memo

0.00

Packaging

Ensure copy of NDT results attached to work order.

CL 09/10/09 ①

CL 09/10/09 ①

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Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190 	QC5- Inspect part completeness to step on W/O	0.00				<u>MA</u>	<u>07</u>	<u>10</u>	<u>13</u> ①
QC Quality Control	Memo Ensure results are as per Dwg D206-667-243	0.00							
200 	SprayPaint	0.00				<u>MA</u>	<u>09</u>	<u>10</u>	<u>19</u> ①
SprayPaint Spray Painting	Memo 1-Prime inside and outside crosstube as per QSI 005 4.2 crosstube with White Imron as per QSI 005 4.2 Time: <u>10:00</u> <input type="checkbox"/> Finish Time: <u>10:30</u> <input type="checkbox"/> PAINT: <input type="checkbox"/> Start Time: <u>2:30</u> <input type="checkbox"/> Finish Time: <u>3:30</u>	0.00							
210 	QC14- Inspect Spray Paint	0.00				<u>ET</u>	<u>09</u>	<u>10</u>	<u>-20</u>
QC Quality Control	Memo Wrap in plastic bag to protect from scratches	0.00							

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Reference:

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
220 Crosstubes	Crosstubes	0.00				<u>ml</u>	<u>09</u>	<u>10</u>	<u>21</u> ①
Crosstubes	Memo	0.00							
Crosstubes	1-Install nut plates as per Dwg D206-667-243.								
230 Skidtubes	Skidtubes	0.00				<u>ml</u>	<u>09</u>	<u>10</u>	<u>20</u> ①
Skidtubes	Memo	0.00							
Skidtubes	1-Install support using 0.03" to 0.06" thick layer of magnobond 6398 per QSI 015. Let cure for 12h after installation and prior to packaging. Note: (3) top holes should be facing up. □ A/R Magnobond 6398 : 112417 exp: 01/2012. Install supports and clamps as								
240 QC	QC5- Inspect part completeness to step on W/O	0.00							
QC	Memo	0.00							
Quality Control									

7/30/09

①

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Cust Item ID:

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Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
250 Packaging Packaging	Pick Kit Memo	0.00 0.00							
260 QC Quality Control	QC4- 100% Inspect kits for completeness Memo	0.00 0.00							
270 Packaging Packaging	Packaging Memo Identify and pack for shipping as per PPP D206-667 203 <input type="checkbox"/> Location: _____ <input type="checkbox"/> PPP Rev: _____	0.00 0.00							

9/14/22 SF

② 9

10/14/22 (1)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Stop



Item Name: Crosstube Aft

Start Date: 7/30/09 Start Qty: 1.00



Cust Item ID:

Required Date: 8/14/09 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

280

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

09/10/23 *[Signature]*
09/10-23

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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NOTE: Date & initial all entries

Picklist Print

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Page 1

Work Order ID: 50982

Parent Item: D206-667-203RevC

Parent Item Name: Crosstube Aft

Comments:



Start Date: 7/30/09

Required Date: 8/14/09

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	--------------------------	---------------	----------------	--------

S AN5-10A  Bolt		Purchased	No			260	Each	58.0000	10.0000 	112314	SP	
---	--	-----------	----	--	--	-----	------	---------	--	--------	----	--

Warehouse	Loc Qty	Loc Code
Location		

Main Warehouse

ST	58	
107013	8	
110363	2	
111425	10	
111819	38	

S AN5-32A  Bolt		Purchased	No			260	Each	111.0000	4.0000 			
---	--	-----------	----	--	--	-----	------	----------	---	--	--	--

Warehouse	Loc Qty	Loc Code
Location		

Main Warehouse

ST	111	
106242	3	
106519	4	
110363	17	
111916	37	
112082	50	

112082 9/10/22 SP

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Work Order ID: 50982

Parent Item: D206-667-203RevC

Parent Item Name: Crosstube Aft

Comments:

Start Date: 7/30/09

Required Date: 8/14/09

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	--------------------------	---------------	----------------	--------

AN5-34A		Purchased	No			260	Each	50.0000	4.0000			
---------	--	-----------	----	--	--	-----	------	---------	--------	--	--	--



Bolt

Warehouse Location	Loc Qty	Loc Code
-----------------------	---------	----------

Main Warehouse

ST	50	
104679	2	
105408	1	
107013	2	
111425	45	

111425 SP

AN960JD516		Purchased	No			100	Each	1,301.0000	18.0000			
------------	--	-----------	----	--	--	-----	------	------------	---------	--	--	--



Washer

Warehouse Location	Loc Qty	Loc Code
-----------------------	---------	----------

Main Warehouse

ST	1301	
100564	2	
106167	6	
107534	34	
107959	43	
108246	46	
108672	2	
109059	49	
109752	22	
110363	46	
110523	57	
111279	44	
112082	950	

112794

9/10/22 SP

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Shop Packet Print

Page 2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Picklist Print

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Work Order ID: 50982



Parent Item: D206-667-203RevC



Parent Item Name: Crosstube Aft

Start Date: 7/30/09

Required Date: 8/14/09

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D206-667- 203TRNRevC		Manufactured	No			220	Each	2.0000	1.0000			



Crosstube Turning Detail

<u>Warehouse</u> <u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
Main Warehouse		
FG	2	
45623	1	
45625	1	

D2873-043RevA Manufactured No



220 Each 53.0000 2.0000



Nut Plate Assembly

<u>Warehouse</u> <u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
Main Warehouse		
ST	53	
45370	18	
45422	15	
50002	20	

IX MB 09-09-24

MA 091021

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Page 3

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Parent Item Name: Crosstube Aft


Comments:

Start Date: 7/30/09

Required Date: 8/14/09

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2873-045RevA		Manufactured	No			220	Each	71.0000	2.0000			
												
Nut Plate Assembly												

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST

71

45210

11

46772

20

50001

40

ml 09 10 21

D2892-1RevA

Manufactured

No

230

Each

48.0000

2.0000



Support

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST

48

35581

4

41986

20

42785

20

45936

4

ml 09 10 20

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Parent Item Name: Crosstube Aft

Start Date: 7/30/09

Required Date: 8/14/09

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D3595-063-450RevA		Manufactured	No			230	Each	47.8000	4.0000			
RUBBER CUSHION												

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST

47.8

~~38959~~

50953

2

~~43210~~

4.8

~~46465~~

41

ml 09 10 20

MS20601-AD4W10

Purchased

No

230

Each

241.0000

14.0000



RIVET

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST

241

110665

100

111177

141

ml 09 10 21

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MS21042L5		Purchased	No			260	Each	641.0000	4.0000			
												
Nut												

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST 641

110382 10

111127 131

111636 500

MS21920-22

Purchased

No

260

Each

114.0000

4.0000



Clamp(per MIL-DTL-8783C)

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST 114

109495 14

110260 50

111210 50

111636 50 9/10/28

m/ 09 10 20

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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

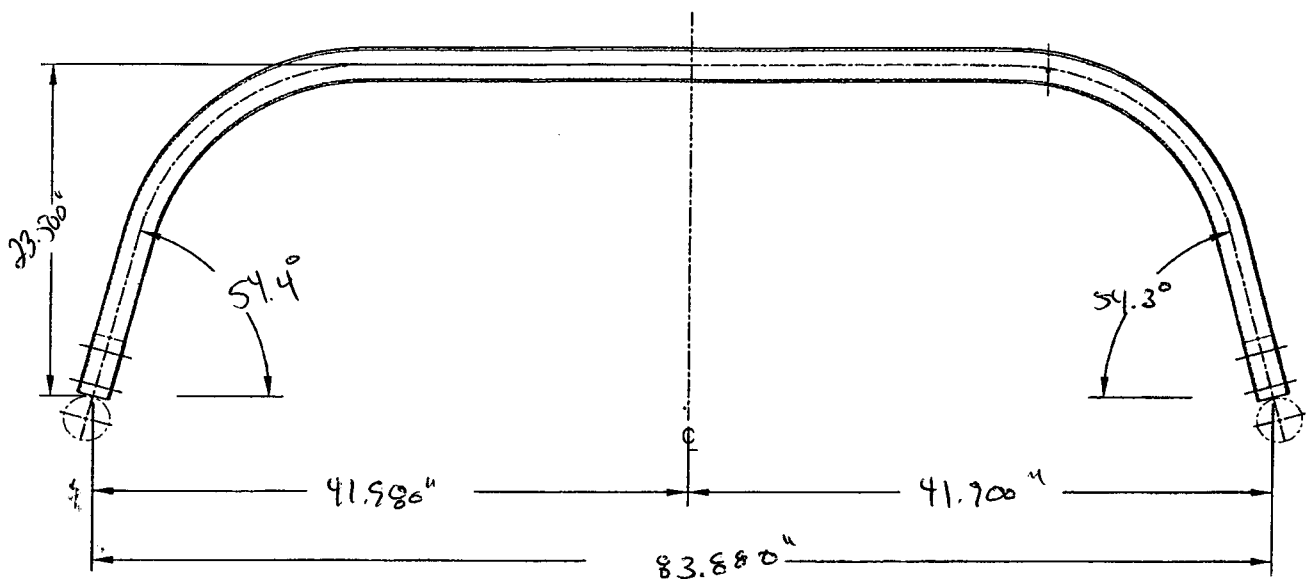
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DART AEROSPACE LTD		Work Order:	50982
Description: Crosstube High Aft (206L)		Part Number:	D206-667-203
Inspection Dwg: D206-667-243		Rev: <i>PC</i>	Page 1 of 1

EF
09.09.21

Required Dimension	Min	Max
Height	23.46	23.58
1/2 Span	41.86	41.98
Angle	54	56
Total Span	83.72	83.96



Comments

QC15 Inspection	<i>S</i>
Date	07/01/25

Rev	Date	Change	Revised by	Approved
A	07.02.06	New Issue	KJ/JM <i>af</i>	<i>fu</i>

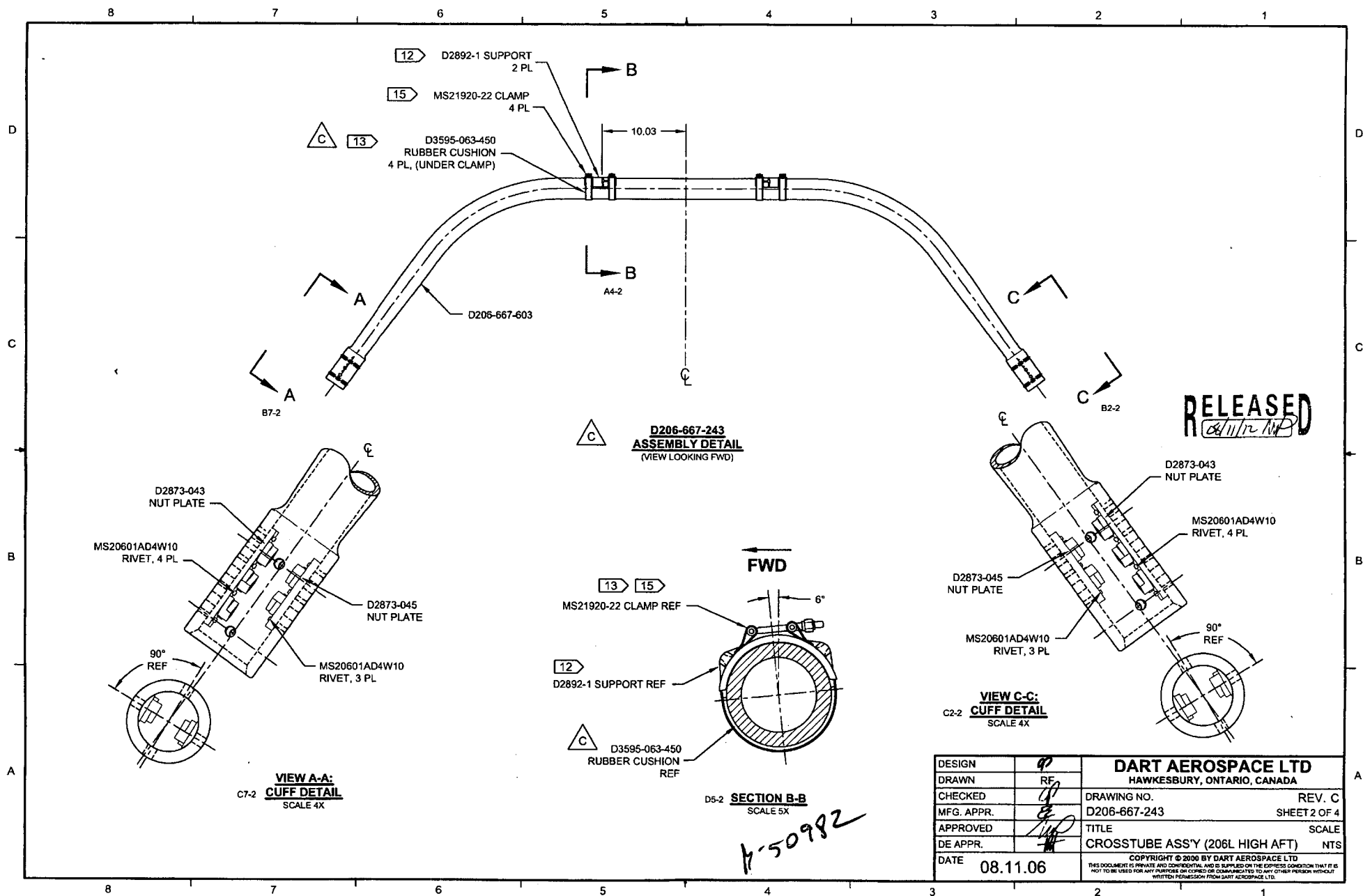
Item	Qty -243	Part Number	Description
1	X	D206-667-243	CROSSTUBE ASSEMBLY (206L HIGH AFT)
2	1	D6004-115	CROSSTUBE
3	2	D2873-043	NUT PLATE
4	2	D2873-045	NUT PLATE
5	2	D2892-1	SUPPORT
6	4	D3595-063-450	RUBBER CUSHION
7	4	MS21920-22	CLAMP
8	14	MS20601AD4W10	RIVET (OR NAS9302B-4-10)
9	A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299- 947-100, TYPE II, CLASS 2 ADHESIVE)

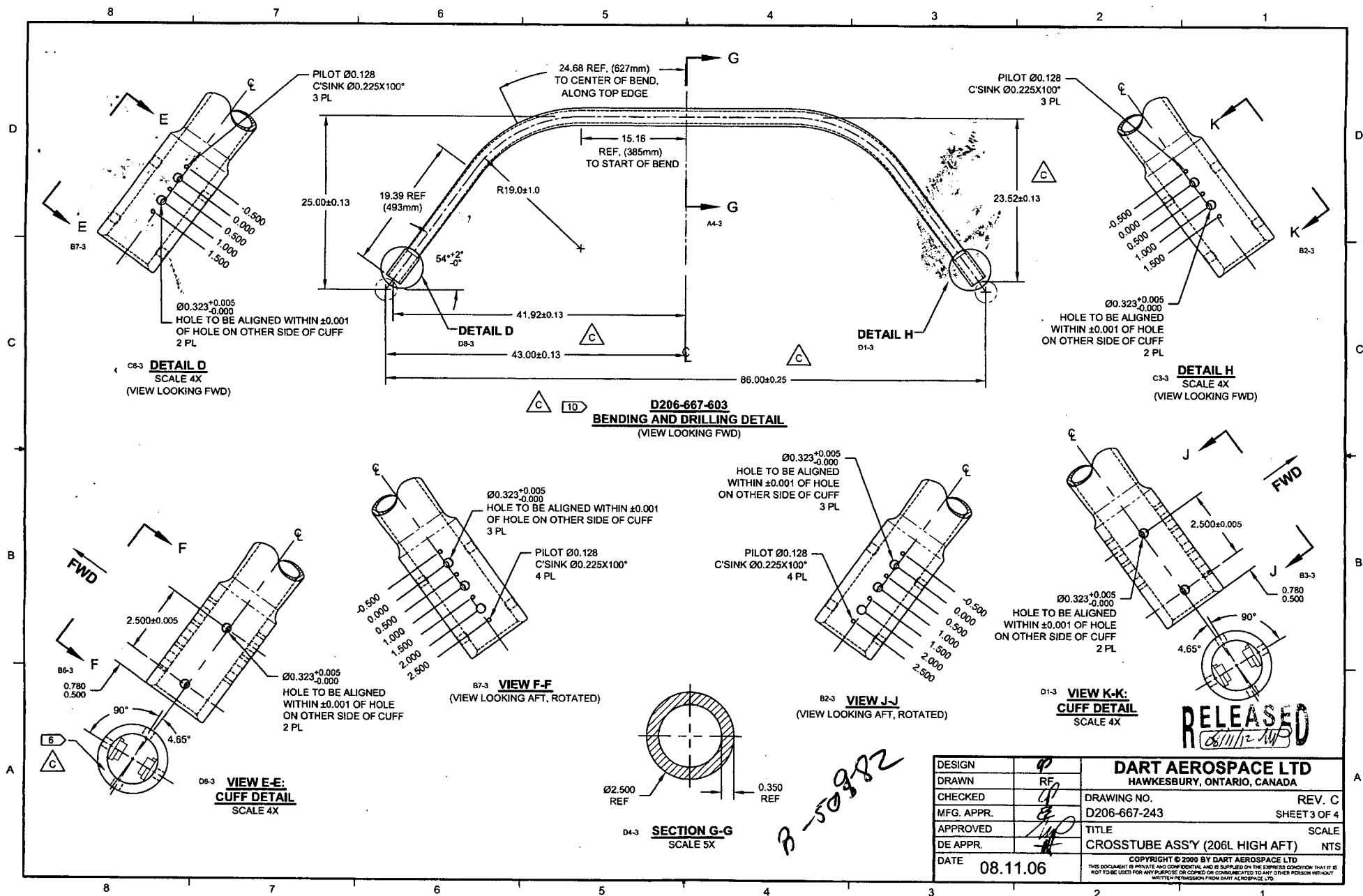
GENERAL NOTES:

- 1) MATERIAL: MANUFACTURED FROM D6004-115
FINISHED LENGTH = 104.91±0.020
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART QSI 006 4.2
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: SCRIBE DART PART NUMBER "D206-667-243" AND BATCH NUMBER ON INSIDE OF CUFF USING VIBRATING STYLUS.
- 7) WEIGHT: 21.9 lbs
- 8) PART IS SYMMETRIC ABOUT CENTERLINE.
- 9) RUN CUTTER OFF PART WHERE INDICATED. BLEND OUT EDGE LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH.
- 10) BEND PROGRESSIVELY WITH A MINIMUM OF 8 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 11) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 12) INSTALL D2892-1 SUPPORT USING 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 PER QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 13) INSTALL MS21920-22 CLAMPS WITH D3595-063-450 RUBBER CUSHIONS TO SECURE THE D2892-1 SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMP MECHANISMS ARE LOCATED ON CROSSTUBE SUPPORTS.
- 14) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 15) TORQUE CLAMPS 80 TO 100 IN.-LB. ENSURE AT LEAST 1.5 THREADS ARE SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

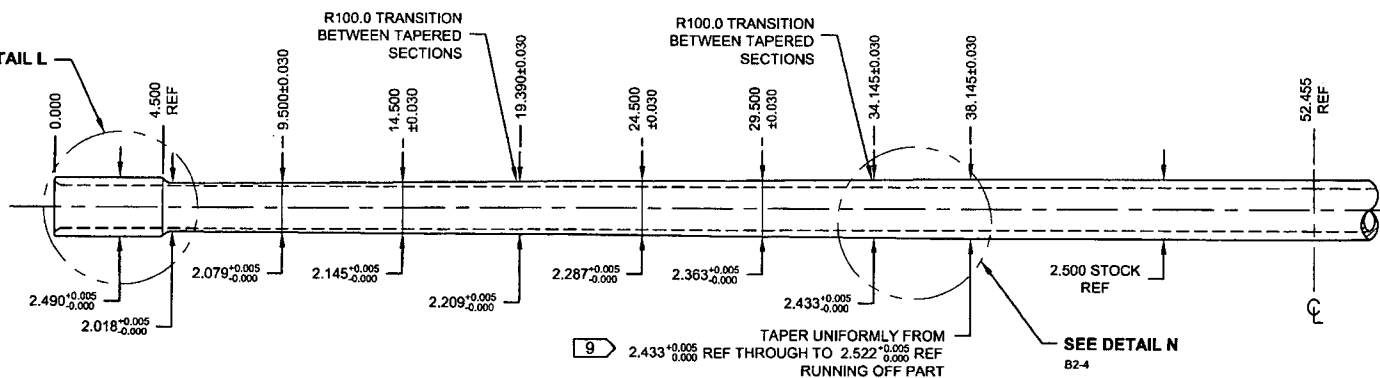
RELEASED
08/11/06

C	REVISE GENERAL NOTES/PART LIST (ZN D7-1); REORGANIZED VIEWS AND REFORMATTED DRAWING TO CURRENT STANDARDS. D3595-063-450 WAS D2858-400-773 (ZN D6-2 & A5-2); REMOVED REF. & ADD TOLERANCES (ZN 4-3, C5-3, D3-3); RELOCATED FLAG #6 (ZN A8-3) PER NCR 210; MOVED TURNING DETAIL & UPDATED TOLERANCE TO SHEET 4.	RF	08.11.06
B	ADD HOLES AND NUT PLATES FOR COMPATABILITY WITH BHT/AA SKUDTUBES	PH	05.07.26
A	NEW ISSUE	CP	00.11.17
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF	DRAWING NO.	REV. C
CHECKED	RF	D206-667-243	SHEET 1 OF 4
MFG. APPR.	RF	TITLE	SCALE
APPROVED	RF	CROSSTUBE ASS'Y (206L HIGH AFT)	NTS
DE APPR.	RF	COPYRIGHT © 2000 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	
DATE	08.11.06		

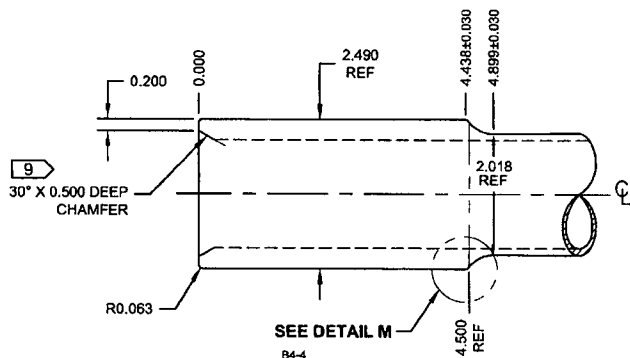




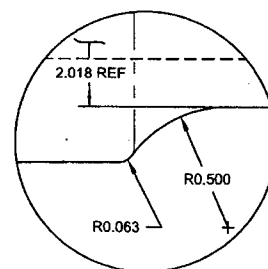
SEE DETAIL L
B7-4



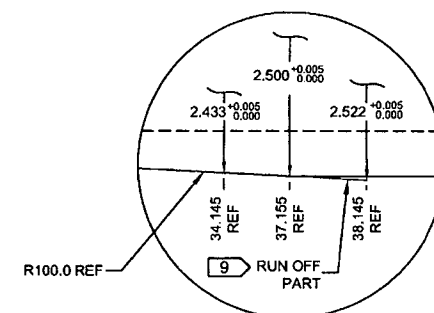
TURNING DETAIL



DETAIL L: CROSSTUBE CUFF
NOT TO SCALE



DETAIL M: CUFF TRANSITION
NOT TO SCALE



DETAIL N: TAPER RUN-OFF
NOT TO SCALE

RELEASED

DESIGN	9	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	9	DRAWING NO.	REV. C
MFG. APPR.	9	D206-667-243	SHEET 4 OF 4
APPROVED	9	TITLE	SCALE
DE APPR.	9	CROSSTUBE ASS'Y (206L HIGH AFT)	NTS
DATE	08.11.06	COPYRIGHT © 2006 BY DART AEROSPACE LTD	
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B-50982

REFERENCE ONLY

5.0 PARTS LIST

Item	Qty -011	Qty -013	Qty -015	Qty -101	Qty -201	Qty -103	Qty -203	Qty -105	Qty -205	Part Number	Description
	X									D206-667-011	SPACER BLOCK KIT
		X								D206-667-013	NUT PLATE KIT (-101/-103/-105/-203/-205)
			X							D206-667-015	NUT PLATE KIT (-201)
				X						D206-667-101	CROSSTUBE INSTALLATION, 206A/B HIGH FWD
					X					D206-667-201	CROSSTUBE INSTALLATION, 206A/B HIGH AFT
						X				D206-667-103	CROSSTUBE INSTALLATION, 206L/L-1/L-3/L-4 HIGH FWD
							X			D206-667-203	CROSSTUBE INSTALLATION, 206L/L-1/L-3/L-4 HIGH AFT
								X		D407-667-105	CROSSTUBE INSTALLATION, 407 HIGH FWD
									X	D407-667-205	CROSSTUBE INSTALLATION, 407 HIGH AFT
1				1						D206-667-141	CROSSTUBE ASSEMBLY, 206A/B HIGH FWD
2					1					D206-667-241	CROSSTUBE ASSEMBLY, 206A/B HIGH AFT
3						1				D206-667-143	CROSSTUBE ASSEMBLY, 206L/L-1/L-3/L-4 HIGH FWD
4							1			D206-667-243	CROSSTUBE ASSEMBLY, 206L/L-1/L-3/L-4 HIGH AFT
5								1		D407-667-145	CROSSTUBE ASSEMBLY, 407 HIGH FWD
6									1	D407-667-245	CROSSTUBE ASSEMBLY, 407 HIGH AFT
10				*2	*2	*2		*2		D2891-1	SUPPORT
11							*2			D2892-1	SUPPORT
12									*1	D2894-1	SUPPORT
13				*2	*2	*2		*2		D2856-400-694	ABRASION STRIP
14							*2		*2	D2856-400-773	ABRASION STRIP
15									*1	D2856-600-851	ABRASION STRIP
16				*4	*4	*4		*4		MS21920-20	CLAMP
17							*4		*4	MS21920-22	CLAMP
18									*2	MS21920-24	CLAMP
19				4	4	4		4		AN5-32A	BOLT
20							4		4	AN5-34A	BOLT
21				4	4	4	4	4	4	MS21042L5	NUT (OR MS21042-5)
22				8	8	8	8	8	8	AN960JD516	WASHER
23									*2	D3190-1	CHAFING SHIELD
30	8									AN4-6A	BOLT
31	8									AN4-7A	BOLT
32	16									AN960JD416	WASHER
33	2									D3193-041	SPACER BLOCK ASSEMBLY
40		2		*2		*2	*2	*2	*2	D2873-043	NUT PLATE
41		2		*2		*2	*2	*2	*2	D2873-045	NUT PLATE
42			2		2					D2872-043	NUT PLATE
43			2		2					D2872-045	NUT PLATE
44		10		10		10				AN5-7A	BOLT
45		10	10		10		10	10	10	AN5-10A	BOLT
46		4	4	4	10	4		4		AN5-30A	BOLT
47		4					4		4	AN5-32A	BOLT
48		18	18	10	12	10	10	10	10	AN960JD516	WASHER
49		4	4		6					MS21042L5	NUT (OR MS21042-5)

*REFERENCE ONLY. PARTS ARE INCLUDED IN D206-667-141/241/143/243, & D407-667-145/245 ASSEMBLIES ABOVE

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Revision: C

Date: 05.07.26

50982



LIQUID PENETRANT TEST REPORT

P- 1536

PAGE 1 OF

TIME AM ☒ P

CLIENT

DACT AEROSPACE

DATE

OCT-8-2009

ATTENTION

LINDA/CHAUTEL

ACUREN JOB NO.

188-08-001567

ADDRESS

1270 ABENDEEP ST, HAWKESBURY
ON. K6H 1K7

PO/NO No.

- 10557

WORK LOCATION

SAME

ACCEPTANCE STD.

ASTM 1417

REV./DATE

200

PROJECT

F.P.I. on CROSS TUBES AND MACHINED PARTS

ITEM(S) EXAMINED

10 CROSS TUBES

13 MACHINED PARTS

JOB DESCRIPTION

PROCEDURE No. LT-

REV./DATE

TECHNIQUE No. LT-

REV./DATE

PART NO.

STAINLESS STEEL

MATERIAL

ALUMINUM

THICKNESS

N/A

SCOPE

WET FLUORESCENT LIQUID PENETRANT INSPECTION
CARRIED OUT 100% EXTERNAL

TEST DETAILS

METHOD

☒ FLUORESCENT☐ VISIBLE☒ WATER WASH☐ SOLVENT REMOVABLE☐ POST EMUL

FAMILY BRAND

MAGNA FLUX

BLACK LIGHT S/N

16459

☐ OUTPUT > 1000 μ W/cm²☐ AMBIENT <

PENETRANT

2L-67

MINIMUM DWELL TIME

45 MIN.

LIGHTING EQUIP.

☐ FLASHLIGHT☐ TROUBLELIGHT☐ OUTPUT > 100 fc @ 5

PENETRANT REMOVER

H 20

MINIMUM DRY TIME

> 10 MIN.

OTHER

LABING

DEVELOPER

SKD 52

MINIMUM DWELL TIME

10 MIN.

LIGHT METER S/N

CAL DUE DATE

DEVELOPER TYPE

☒ NON AQUEOUS☐ AQUEOUS☐ DRY

TEST SURFACE

SURFACE CONDITION

☐ AS GROUND☐ AS WELDED☒ MACHINED☐ SHOT BLASTED☐ CLEAN BARE ME

SURFACE TEMPERATURE

☐ < - 4°C/ 20°F☐ - 4°C/ 20°F TO 10°C/ 50°F☒ 10°C/ 50°F TO 52°C/ 125°F☐ > 52°C/ 125°F

RESULTS-

☒ METRIC ☐ IMPERIAL

1 - W.O. 51939 - CROSS TUBE ✓
1 - W.O. 51940 - CROSS TUBE ✓
1 - W.O. 52054 - CROSS TUBE ✓
1 - W.O. 52055 - CROSS TUBE ✓
~~1 - W.O. 51297 - CROSS TUBE~~ ✓
1 - W.O. 51937 - CROSS TUBE ✓
1 - W.O. 51938 - CROSS TUBE ✓
1 - W.O. 52052 - CROSS TUBE ✓
1 - W.O. 52053 - CROSS TUBE ✓
1 - W.O. 50982 - CROSS TUBE ✓
1 - W.O. 50983 - CROSS TUBE ✓
13 - W.O. 51297 - STUDS ✓

ALL PARTS EXAMINED. HAVE
BEEN FOUND ACCEPTABLE
TO STANDARD.

09 10 13

Scope of Services

The agreement of Acuren Group Inc. to perform services extends only to those services provided for in writing. Under no circumstances shall such services extend beyond the performance of the requested services. It is expressly that all descriptions, comments and expressions of opinion reflect the opinions or observations of Acuren Group Inc. based on information and assumptions supplied by the owner/operator and are not intended nor can they be construed as representations or warranties. Acuren Group Inc. is not assuming any responsibilities for the engineering, manufacture, repair and use decisions as a data or other information provided by Acuren Group Inc. In no event shall Acuren Group Inc.'s liability in respect of the services referred to herein exceed the amount paid for such services.

Standard of Care

In performing the services provided, Acuren Group Inc. uses the degree, care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, express implied, is made or intended by Acuren Group Inc.

SIGNATURES

CLIENT REPRESENTATIVE

MATTHEW MURDOCH

SIGNATURE

DTR #

E-27843

TECHNICIAN (SIGNATURE):

Mike Johnston

REPORT

REVIEWED BY:

NAME

INIT

NAME (PRINT):

1ST TECHNICIAN2ND TECHNICIAN

CGSB LEVEL

2

SNT LEVEL

2

CGSB LEVEL

SNT LEVEL

CGSB REG. NO.

6060

CGSB REG. NO.

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PT.5